



# HK Composites

# HK ISO III

## Rigid Polyisocyanurate Insulation

HK ISO III insulation combines a high-performance polyisocyanurate foam core with a multiplex kraft/aluminum/poly facer. This contributes to its strength, high R-value and moisture resistance.

### Basic Use

ISO III insulation is designed for use in concrete walls (precast, tilt-up or cast-in-place), where it is sandwiched between two layers of concrete with connectors holding together the finished wall. The polyisocyanurate core provides superior insulation, while the facer contributes to moisture resistance.

Because it has no exposed metal facings, the HK ISO III facer will not corrode or react chemically with the concrete wall.

### Installation

HK ISO III insulation is lightweight and easy to handle, cut and install. In concrete wall applications, the insulation boards are sandwiched between two concrete layers and the assembly is held together with connectors.

### Sizes

Width and length: 4' x 8' (square edge)

Thickness: 1"-4.5"

### Applicable Standards

- ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board, Type I, Class 1
- C518 – Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
- C1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- C203 – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- C209 – Standard Test Methods for Cellulosic Fiber Insulating Board
- E96 – Standard Test Method for Water Vapor Transmission of Materials
- D2126 – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging

### Physical and Chemical Properties

HK ISO III insulation exhibits the properties and characteristics indicated in Table 1 when tested as represented.

### Environmental Data

HK ISO III insulation is manufactured with hydrocarbon blowing agents, which have no ozone depletion potential.

### Fire Protection

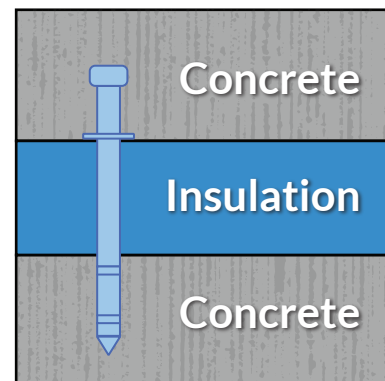
HK ISO III insulation is combustible; protect from high heat sources.

### Codes and Compliances

HK ISO III insulation complies with the following codes:

- International Residential Code (IRC 2009)
- International Building Code (IBC 2009)

Application and system code requirements vary.



**Table 1: Physical Properties of HK ISO III Insulation**

| Property and Test Method                                                                             | Value       |
|------------------------------------------------------------------------------------------------------|-------------|
| Thermal Resistance(1), per inch, ASTM C518 @ 75°F mean temp., ft <sup>2</sup> •°F/Btu, R-value, min. | 6.5         |
| Compressive Strength(2), ASTM D1621, psi, min.                                                       | 20.0 - 25.0 |
| Flexural Strength, ASTM C203, psi, min.                                                              | 55.0        |
| Water Absorption, ASTM C209, % by volume, max.                                                       | < 0.02      |
| Water Vapor Permanence, ASTM E96, perms, max.                                                        | < 0.01      |
| Maximum Use Temperature, °F                                                                          | 250         |
| Dimensional Stability, ASTM 2126, %linear change.                                                    | 2%          |

All test specimens were conditioned in accordance with procedures outlined in ASTM C1289-07, Section 11.1.2.1

### Address

926 Auto Mall Dr. #4  
American Fork, UT 84003

### Phone

Toll-Free: 1-800-430-6316  
International: 801-763-0907

### Website

[www.HKTies.com](http://www.HKTies.com)

0322



HK Composites



# HK Composites

# HK ISO III

## Rigid Polyisocyanurate Insulation

### Packaging and Weight Chart

| SIZE | R-Value | PCS PL | LBS<br>4X8 PC | LBS<br>4X4 PL | 4X4<br>SF/PL | LBS<br>4X8 PL | 4X8<br>SF/PL | SF 48'<br>TRAILER | WEIGHT<br>PER SF |
|------|---------|--------|---------------|---------------|--------------|---------------|--------------|-------------------|------------------|
| 0.5  |         | 80     | 3.71          | 148.48        | 1280         | 296.96        | 2560         | 61440             | 0.12             |
| 1.0  | 6.5     | 48     | 6.37          | 152.83        | 768          | 305.66        | 1536         | 36864             | 0.20             |
| 1.1  | 7.2     | 40     | 6.91          | 138.24        | 640          | 276.48        | 1280         | 30720             | 0.22             |
| 1.2  | 7.9     | 38     | 7.42          | 141.06        | 608          | 282.11        | 1216         | 29184             | 0.23             |
| 1.3  | 8.6     | 34     | 7.97          | 135.46        | 544          | 270.91        | 1088         | 26112             | 0.25             |
| 1.4  | 9.3     | 32     | 8.51          | 136.19        | 512          | 272.38        | 1024         | 24576             | 0.27             |
| 1.5  | 10      | 32     | 9.02          | 144.38        | 512          | 288.77        | 1024         | 24576             | 0.28             |
| 1.6  | 10.7    | 28     | 9.57          | 133.95        | 448          | 267.90        | 896          | 21504             | 0.30             |
| 1.7  | 11.3    | 28     | 10.11         | 141.57        | 448          | 283.14        | 896          | 21504             | 0.32             |
| 1.8  | 12      | 25     | 10.62         | 132.80        | 400          | 265.60        | 800          | 19200             | 0.33             |
| 1.9  | 12.6    | 24     | 11.17         | 134.02        | 384          | 268.03        | 768          | 18432             | 0.35             |
| 2.0  | 13.3    | 24     | 11.71         | 140.54        | 384          | 281.09        | 768          | 18432             | 0.37             |
| 2.1  | 14      | 21     | 12.22         | 128.35        | 336          | 256.70        | 672          | 16128             | 0.38             |
| 2.2  | 14.8    | 20     | 12.77         | 127.68        | 320          | 255.36        | 640          | 15360             | 0.40             |
| 2.3  | 15.5    | 20     | 13.31         | 133.12        | 320          | 266.24        | 640          | 15360             | 0.42             |
| 2.4  | 16.2    | 19     | 13.82         | 131.33        | 304          | 262.66        | 608          | 14592             | 0.43             |
| 2.5  | 17      | 19     | 14.37         | 136.50        | 304          | 272.99        | 608          | 14592             | 0.45             |
| 2.6  | 17.7    | 18     | 14.91         | 134.21        | 288          | 268.42        | 576          | 13824             | 0.47             |
| 2.7  | 18.3    | 17     | 15.42         | 131.10        | 272          | 262.21        | 544          | 13056             | 0.48             |
| 2.8  | 19      | 16     | 15.97         | 127.74        | 256          | 255.49        | 512          | 12288             | 0.50             |
| 2.9  | 19.6    | 15     | 16.51         | 123.84        | 240          | 247.68        | 480          | 11520             | 0.52             |
| 3.0  | 20.3    | 16     | 17.02         | 136.19        | 256          | 272.38        | 512          | 12288             | 0.53             |
| 3.1  | 21      | 15     | 17.57         | 131.76        | 240          | 263.52        | 480          | 11520             | 0.55             |
| 3.2  | 21.8    | 14     | 18.11         | 126.78        | 224          | 253.57        | 448          | 10752             | 0.57             |
| 3.3  | 22.5    | 14     | 18.62         | 130.37        | 224          | 260.74        | 448          | 10752             | 0.58             |
| 3.4  | 23.3    | 13     | 19.17         | 124.59        | 208          | 249.18        | 416          | 9984              | 0.60             |
| 3.5  | 24      | 13     | 19.71         | 128.13        | 208          | 256.26        | 416          | 9984              | 0.62             |
| 3.6  | 24.6    | 12     | 20.22         | 121.34        | 192          | 242.69        | 384          | 9216              | 0.63             |
| 3.7  | 25.2    | 12     | 20.77         | 124.61        | 192          | 249.22        | 384          | 9216              | 0.65             |
| 3.8  | 25.8    | 12     | 21.31         | 127.87        | 192          | 255.74        | 384          | 9216              | 0.67             |
| 3.9  | 26.4    | 11     | 21.82         | 120.03        | 176          | 240.06        | 352          | 8448              | 0.68             |
| 4.0  | 27      | 12     | 22.37         | 134.21        | 192          | 268.42        | 384          | 9216              | 0.70             |
| 4.1  | 27.6    | 11     | 22.91         | 126.02        | 176          | 252.03        | 352          | 8448              | 0.72             |
| 4.2  | 28.2    | 10     | 23.46         | 117.28        | 160          | 234.56        | 320          | 7680              | 0.73             |
| 4.3  | 28.3    | 10     | 23.97         | 119.84        | 160          | 239.68        | 320          | 7680              | 0.75             |
| 4.4  | 29.3    | 10     | 24.51         | 122.56        | 160          | 245.12        | 320          | 7680              | 0.77             |
| 4.5  | 30      | 10     | 25.02         | 125.12        | 160          | 250.24        | 320          | 7680              | 0.78             |

#### Address

926 Auto Mall Dr. #4  
American Fork, UT 84003

#### Phone

Toll-Free: 1-800-430-6316  
International: 801-763-0907

#### Website

[www.HKTies.com](http://www.HKTies.com)

0322



HK Composites